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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,413	01/15/2004	Yoshiyuki Akiyama	03327.2318	3372

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EXAMINER	
HEITBRINK, JILL LYNNE	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/757,413	AKIYAMA ET AL.	
	Examiner	Art Unit	
	Jill L. Heitbrink	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 21 June 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6/30/05, 1/15/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kamiguchi et al. (European Patent Application 418398).

3. Kamiguchi discloses a waveform monitoring apparatus including a hydraulic cylinder (col. 12, line 14), incorporated in an injection molding device for ejecting a molding material into a mold. A sensor (col. 12, lines 16-19) generates pressure data of the hydraulic cylinder. A determinant (col.. 10, line 51- col. 11, line 10 and col. 13, lines 40-44), forms a measured value waveform based on the pressure data, and determines whether the pressure data exceeds a reference pressure waveform by a predetermined range. A marking applier (col. 11, lines 11-39) applies a marking (value ER) to an excess portion of the measured value waveform determined by the determinant. A sorter (col. 11, line 55-col. 12, line 2) sorts a product formed from the molding material, wherein the determinant outputs a determination signal indicating whether the pressure data exceeds the reference pressure waveform by the predetermined range to the sorter. Kamiguchi (col. 7, lines 21-31) discloses the determinant stopping (terminating)

an injecting operation of the injection molding device when the measured value waveform in which the pressure data exceeds a reference pressure waveform by a predetermined range is continuously detected more than a predetermined times. In Kamiguchi (col. 5, lines 24-44), the determinant sets an upper limit range and a lower limit range with respect to the reference pressure waveform as the predetermined range. A storage (RAM 108) stores the measured value waveform to which the marking is applied.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriwaki (Japanese Publication 2001-287254 taken together with Kamiguchi et al. (European Patent Application 418398).

6. Moriwaki discloses a method and apparatus for monitoring a waveform, including generating pressure data of an injection molding device for ejecting a molding material into a mold and forming a measured value waveform (Fig. 4) based on the pressure data. Moriwaki determines that the pressure data exceeds a reference pressure waveform by a predetermined range (abstract "control unit discriminates whether there

is an abnormal value with respect to various waveform data". Then, a marking (outlying observation) is applied to an excess portion of the measured value waveform and displayed on the display including variances (paragraphs [0008]-[0013. Kamiguchi (col. 12, lines 11-15) teaches that the pressure data of an injection molding device can be from either an eclectically operated injector or a hydraulically operated injector. It would have been obvious to a person of ordinary skill in the art to use the data collection, storing and monitoring of Moriwaki in a hydraulically operated injection molding apparatus since the controlling and monitoring or abnormalities of the injection pressure is similarly necessary in screw controls for electro-mechanical injection units and hydraulic injection units.

7. The step of outputting a determination signal to a sorter which sorts a product formed from the molding material, wherein the determination signal indicates that whether the pressure data exceeds the reference pressure waveform by the predetermined range is taught by Kamiguchi (col. 11, line 55-col. 12, line 2). It would have been obvious to sort a product in Moriwaki indicated by the abnormality in the waveform since the product has been determined to be abnormal in Moriwaki and thus would not have the same quality as the products produced without abnormal signals. Kamiguchi (col. 7, lines 21-31) discloses the determinant stopping (terminating) an injecting operation of the injection molding device when the measured value waveform in which the pressure data exceeds a reference pressure waveform by a predetermined range is continuously detected more than a predetermined times. It would have been obvious to a person of ordinary skill in the art to stop the injecting operation when the

measured pressure data waveform exceeds a reference pressure waveform maximum and minimum detected more than a predetermined number of times in Moriwaki since this is a clear indication that correction of the problem is not occurring during the operation of the injection molding.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kamiguchi (US 5,800,748) shows the graphing of the pressure deviation MP. Imatomi (JP 4-74626) shows a deviation graph. Ito (US 5792395) shows the rotational force within upper and lower limits to determine abnormality. Yamamoto (JP 62-106318 and 62-106317) show a CRT display to easily show tolerance value curves with different colors and alarm.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is (571) 272-1199. The examiner can normally be reached on Monday-Friday 9 am -2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jill L. Heitbrink
Primary Examiner
Art Unit 1732

jlh